

IN THE CLAIMS:

Please cancel claims 1-21.

Please add the following new claims.

22. A method of processing grains comprising capillaries and having at least a fibrous shell, into a fibers containing fraction and a fraction comprising the remaining constituents of the grains, the method comprising:

- B<sub>1</sub>
- a. pretreating the grains by subjecting the grains to a moistening treatment with an amount of moisture effective for making the fibrous shell split from the remaining portion of the grain after a thermal shock;
  - b. subjecting the grains thus pretreated to a thermal shock in an amount effective for generating internal pressure in the capillaries of the grains, the internal pressure being effective for splitting the fibrous shell from the remaining portion from the grain;
  - c. subjecting the grains which have been subjected to the moisture treatment and the thermal shock, to a mechanical treatment in an amount effective for removing the fibrous shell from the remaining portion of the grain; and
  - d. separating a fibers containing fraction from a fraction comprising the remaining constituents of the grains.

23. A method according to claim 22, wherein the grains comprise at least a fibrous shell, a germ and capillaries in the shell and around the germ, and the internal pressure is generated in the capillaries in the shell and in the

capillaries around the germ.

24. A method according to claim 22, wherein the thermal shock is carried out by a cold transfer medium.

25. A method according to claim 24, wherein the cold-transfer medium is a cryogenic medium.

26. A method according to claim 22, wherein said mechanical treatment comprises milling of the grains.

*Cont*  
27. A method of removing fibrous shells from grains, the grains comprising at least a fibrous shell having capillaries, wherein the method comprises:

- a. subjecting the grains to a moisture treatment to put moisture into the capillaries in an amount effective for making the fibrous shell split from the remaining portion of the grain after a thermal shock,
- b. subjecting the grains thus pretreated to a thermal shock in an amount effective for generating stresses and strains in the capillaries of the shell, these stresses and strains being effective for splitting the shell of the grain from the remaining portion of the grain; and
- c. subjecting the grains which were thermally shocked to a mechanical treatment to remove the fibrous shells.

28. A method according to claim 27, wherein the grains are selected from cereal grains or oilseeds.

29. A method according to claim 27, further comprising separating the mechanically treated grains into a fraction of decorticated grains and a fraction of fibrous shells.

30. A method according to claim 27, further comprising processing the decorticated grains into a starch fraction and a protein fraction.

31. A method according to claim 27, wherein the thermal shock is carried out by a cold transfer medium.

*By cont*  
32. A method according to claim 31, wherein the cold-transfer medium is a cryogenic medium.

33. A method according to claim 27, wherein said mechanical treatment comprises milling of the grains.

34. A method according to claim 33, wherein said milling is carried out in a mill of a centrifuge type mounted with at least one impact blade.

35. A method according to claim 27, further comprising sorting the grains preceding the moisture treatment, wherein the grains are separated into a fraction of whole grains and a fraction comprising foreign matter and/or damaged grains.

36. A method according to claim 35, wherein said sorting is carried out utilizing optical recognition techniques.

37. A method according to claim 27, further comprising removing the germs from the fraction comprising the decorticated grains, and separating the germs removed to

provide decorticated grains with germs removed.

38. A method according to claim 37, further comprising separating the decorticated grains with germs removed into a starch fraction and a protein fraction.

*Blend*  
39. A method according to claim 38, further comprising mixing the starch fraction with water to prepare a slurry of starch for refining thereof into glyucose syrup.

40. A method according to claim 37, further comprising separating the decorticated grains with germs removed into a lipid fraction and a protein fraction.

41. A method of fractionating capillaries-containing plant material, the method comprises a step of applying internal mechanical pressure within the capillaries.

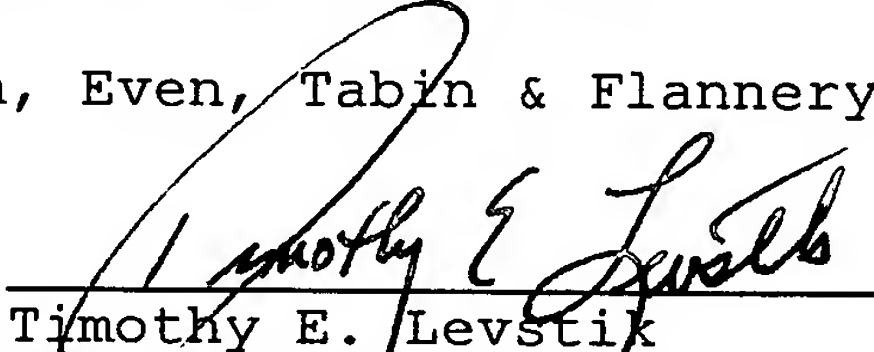
REMARKS

Upon entry of the present Amendment, claims 1-21 have been canceled, claims 22-41 have been added, and claims 22-41 are pending.

Respectfully submitted,

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